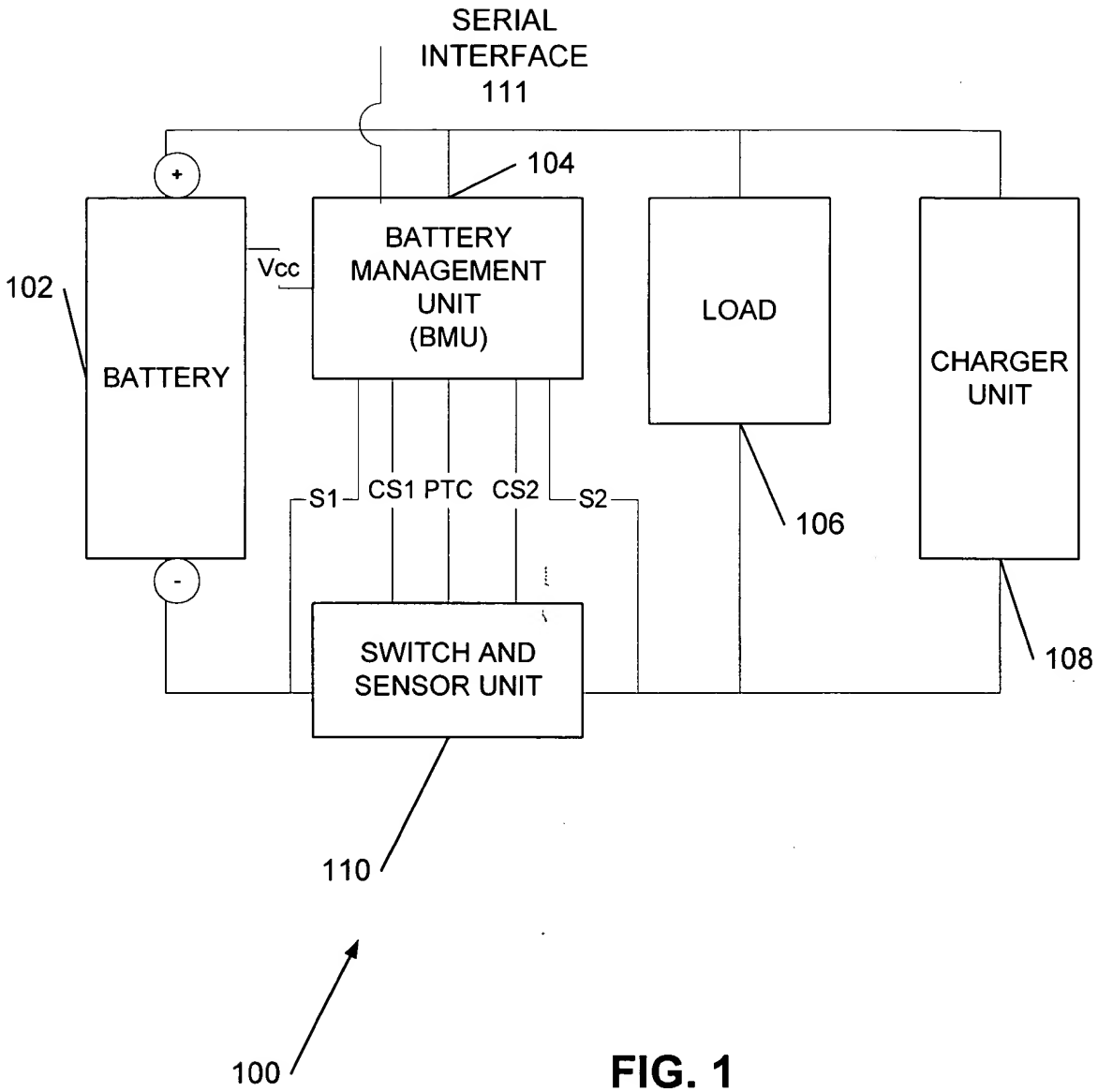
SERIAL
INTERFACE
111
104
+
102
BATTERY
Vcc
BATTERY
MANAGEMENT
UNIT
(BMU)
LOAD
CHARGER
UNIT
S1
CS1 PTC
CS2
S2
106
-
SWITCH AND
SENSOR UNIT
108
110
100

FIG. 1

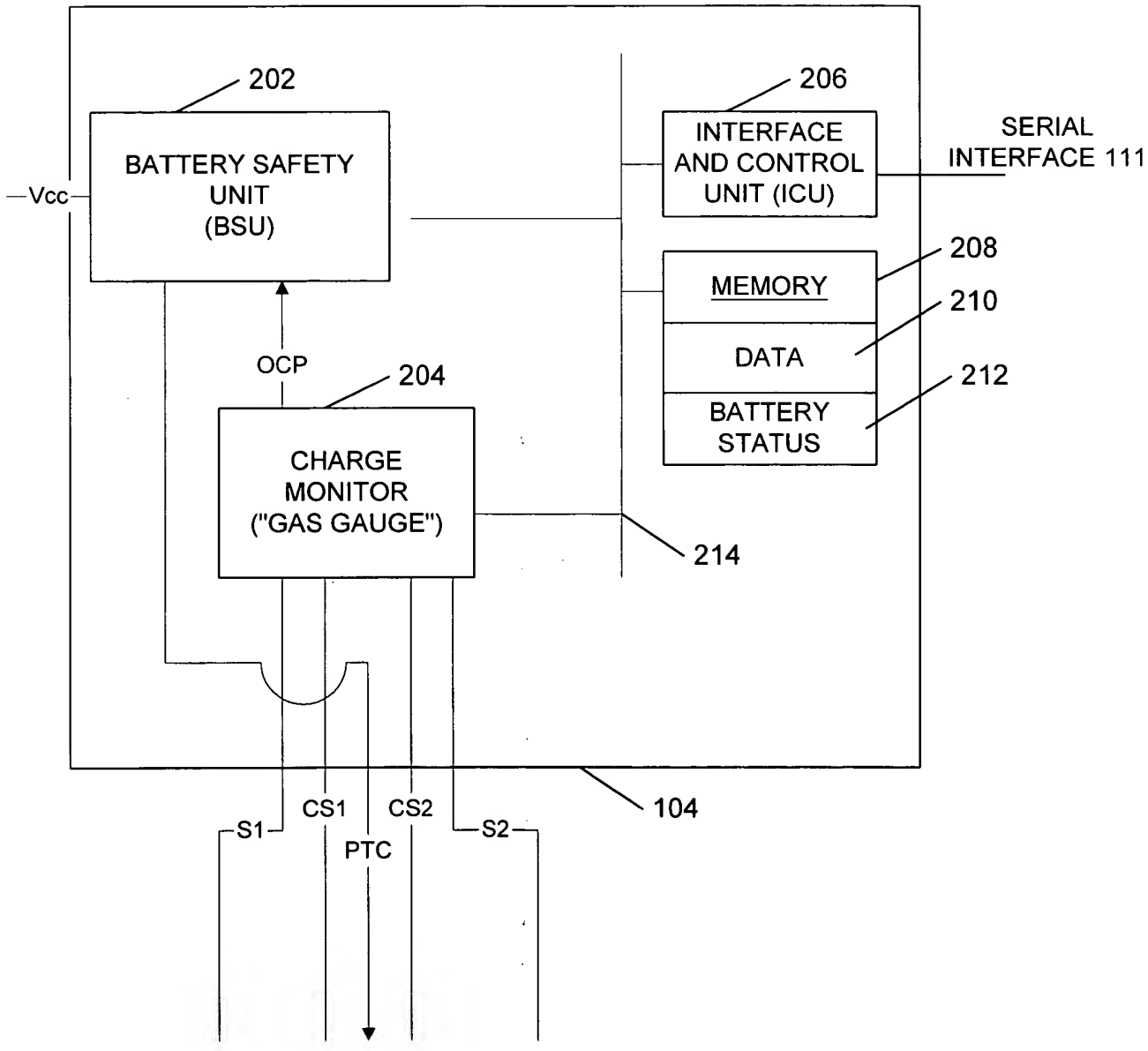
202
206
BATTERY SAFETY UNIT (BSU)
INTERFACE AND CONTROL UNIT (ICU)
SERIAL INTERFACE 111
Vcc
208
MEMORY
210
DATA
212
BATTERY STATUS
OCP
204
CHARGE MONITOR ("GAS GAUGE")
214
104
S1
CS1
CS2
S2
PTC

FIG. 2

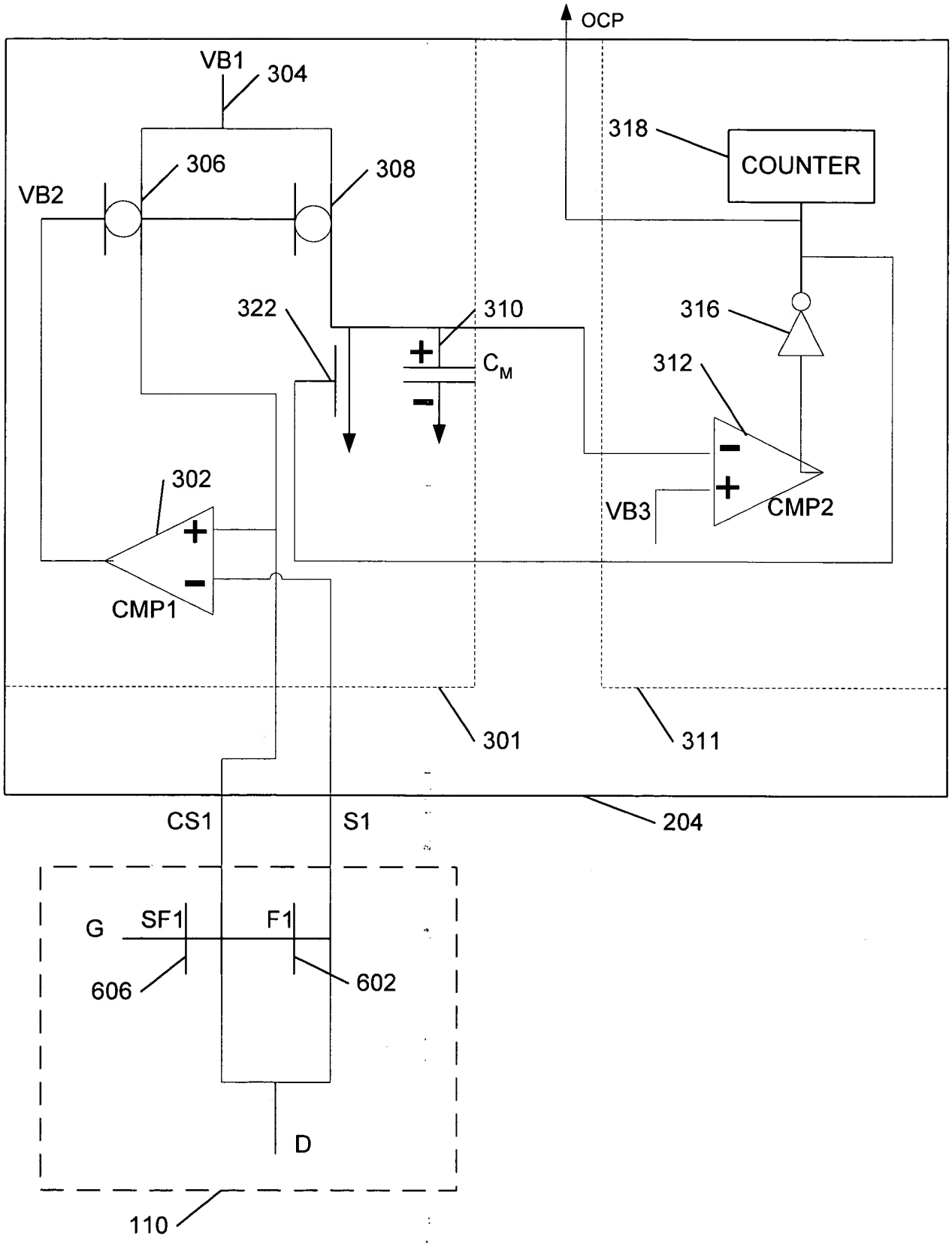
OCP
VB1
304
318
COUNTER
306
308
VB2
322
310
316
C_M
312
302
VB3
CMP2
CMP1
301
311
204
CS1
S1
G
SF1
F1
606
602
D
110

FIG. 3

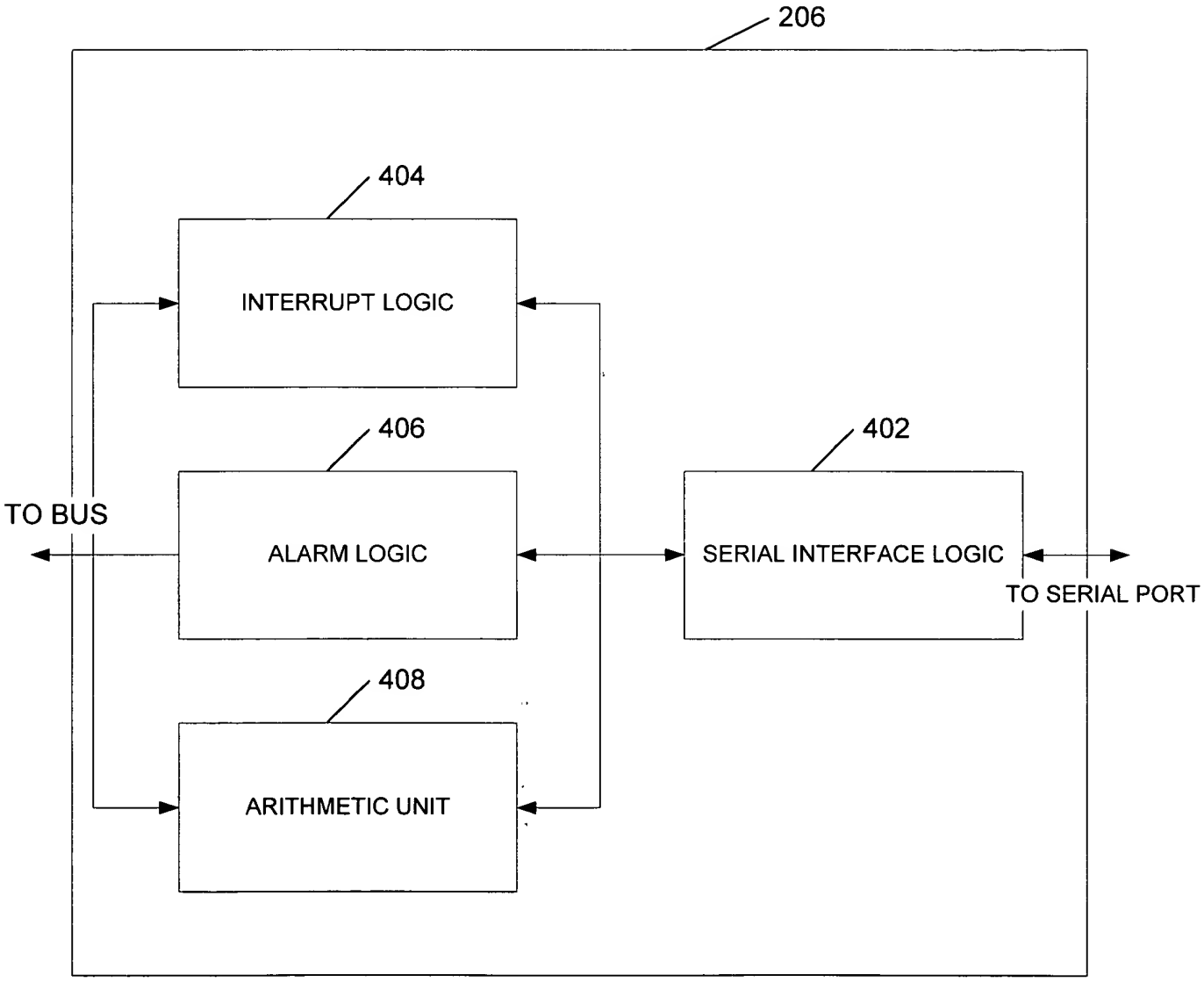
206
404
INTERRUPT LOGIC
406
ALARM LOGIC
408
ARITHMETIC UNIT
402
SERIAL INTERFACE LOGIC
TO BUS
TO SERIAL PORT

FIG. 4

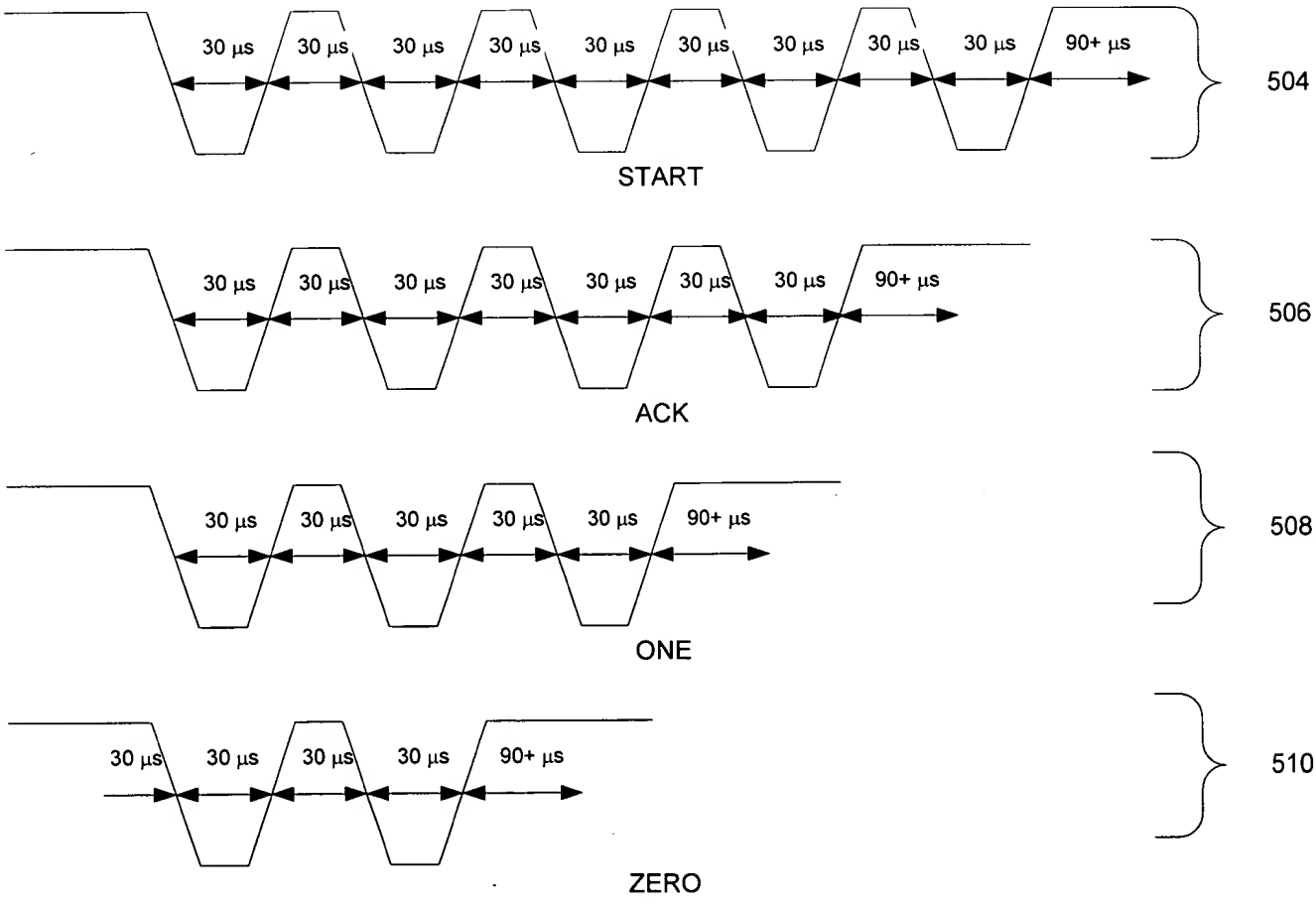
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
90+ µs
504
START
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
30 µs
90+ µs
506
ACK
30 µs
30 µs
30 µs
30 µs
30 µs
90+ µs
508
ONE
30 µs
30 µs
30 µs
30 µs
90+ µs
510
ZERO

FIG. 5

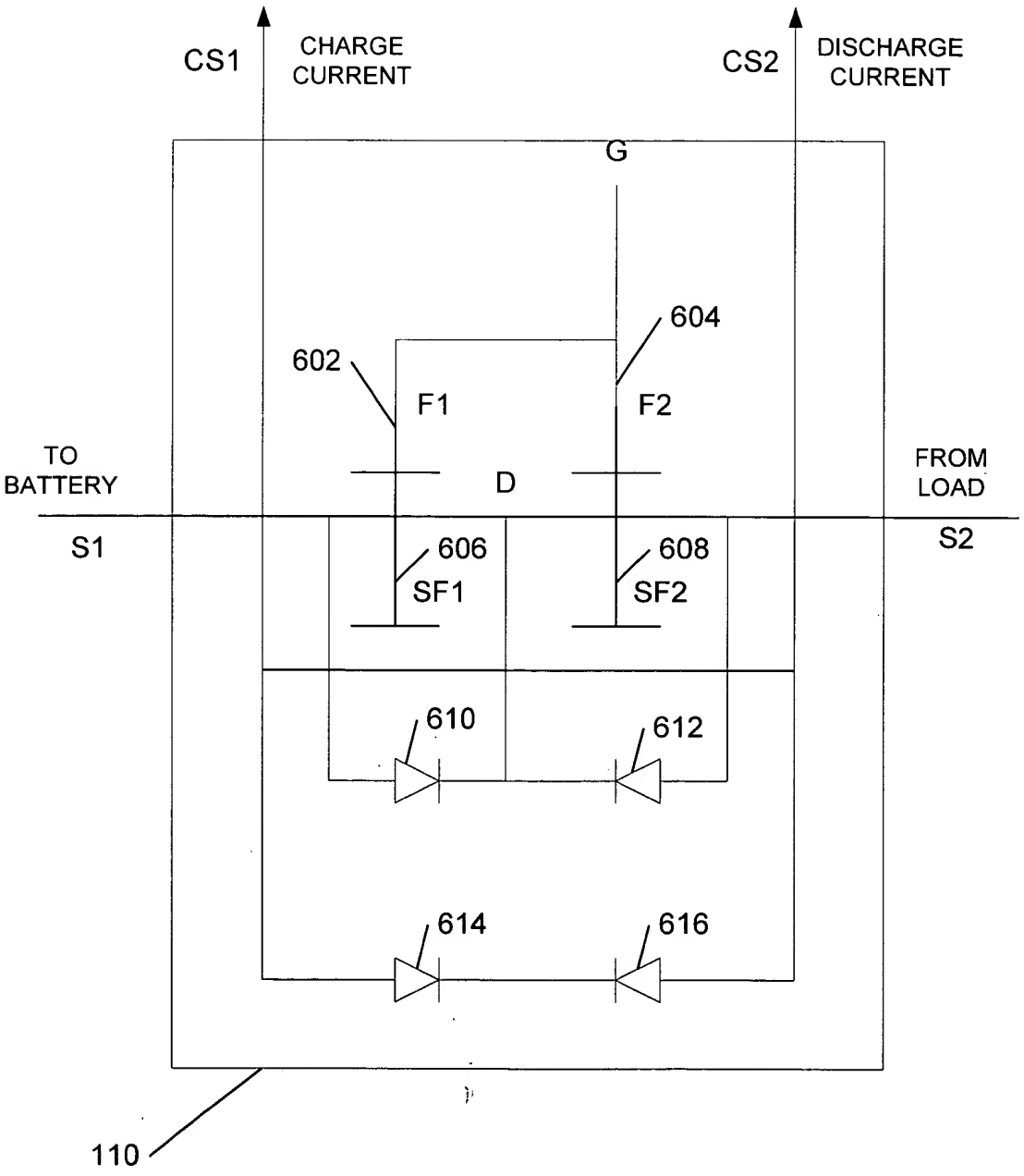
CS1
CHARGE CURRENT
CS2
DISCHARGE CURRENT
G
602
604
F1
F2
D
TO BATTERY
FROM LOAD
S1
S2
606
608
SF1
SF2
610
612
614
616
110

FIG. 6